

# INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC715-2-EP	Serial No.: 10/500,660
Applicant: BRON et al.	
Filing Date: March 31, 2006	Group: 1636
Page 1 of 2	Date of this Submission: April 26, 2006

## US PATENT DOCUMENTS

Examiner's Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date
A1						
A2						
A3						
A4						
A5						
A5						
A7						
A8						
A9						
A10						
A11						

## FOREIGN PATENT DOCUMENTS

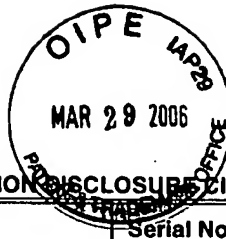
Examiner's Initials	Document Number	Date	Country	Class	Sub-Class	Translation Yes/No
B1						
B2						
B3						

## OTHER DOCUMENTS

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
C1 /N.V./	Copy of the supplementary European search report mailed February 14, 2006.
C2 /N.V./	Tjalsma et al., "Complementary Impact of Paralogous Oxal-like Proteins of <i>Bacillus subtilis</i> on Post-translocational Stages in Protein Secretion," <i>The Journal of Biological Chemistry</i> , 278(18):15622-15632 (2003).
C3 /N.V./	Van Wely et al., "Translocation of proteins across the cell envelope of Gram-positive bacteria," <i>FEMS Microbiology Reviews</i> , 25:437-454 (2001).

Examiner /Nancy Vogel/	Date Considered
	05/04/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



## INFORMATION DISCLOSURE CITATION

Attorney Docket No.: GC715-2-US		Serial No.: 10/500,660
Applicant: BRON et al.		
Filing Date: March 31, 2005	Group: 1636	
Page 1 of 5	Date of this Submission: March 27, 2006	

## US PATENT DOCUMENTS

Examiner's Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date
A1 /N.V./	5,824,502	10-20-98	Honjo et al.			
A2 /N.V./	5,939,317	08-17-99	Fayard et al.			
A3						
A4						
A5						
A6						
A7						
A8						
A9						
A10						
A11						

## FOREIGN PATENT DOCUMENTS

Examiner's Initials	Document Number	Date	Country	Class	Sub-Class	Translation Yes/No
B1						
B2						
B3						

## OTHER DOCUMENTS

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
C1 /N.V./	Copy of the International Search Report for PCT/US02/39634 mailed 28 July 2003.
C2 /N.V./	Altamura et al., "Saccharomyces cerevisiae OXA1 gene is required for the correct assembly of cytochrome c oxidase and oligomycin-sensitive ATP synthase," <i>FEBS Letters</i> , 382:111-115 (1996).
C3 /N.V./	Altschul et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," <i>Nucleic Acids Research</i> , 25(17):3389-3402 (1997).
Examiner	/Nancy Vogel/
Date Considered	05/04/2007

Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

PTO-1449

**INFORMATION DISCLOSURE CITATION**

Attorney Docket No.: GC715-2-US	Serial No.: 10/500,660
Applicant: BRON et al.	
Filing Date: March 31, 2005	Group: 1636
Page 2 of 5	Date of this Submission: March 27, 2006

**OTHER DOCUMENTS**

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
C4 N.V./	Antelmann et al., "A Proteomic View on Genome-Based Signal Peptide Predictions," <i>Genome Research</i> , 11:1484-1502 (2001).
C5	Bauer et al., "PET1402, a nuclear gene required for proteolytic processing of cytochrome oxidase subunit 2 in yeast," <i>Mol. Gen. Genet.</i> , 245:272-278 (1994).
C6	Bengtsson et al., "Subunit II of <i>Bacillus subtilis</i> Cytochrome c Oxidase Is a Lipoprotein," <i>Journal of Bacteriology</i> , 181(2):685-688 (1999).
C7	Bolhuis et al., "SecDF of <i>Bacillus subtilis</i> , a Molecular Siamese Twin Required for the Efficient Secretion of Proteins," <i>The Journal of Biological Chemistry</i> , 273(33):21217-21224 (1998).
C8	Bolhuis et al., "Functional Analysis of Paralogous Thiol-disulfide Oxidoreductases in <i>Bacillus subtilis</i> ," <i>The Journal of Biological Chemistry</i> , 274(35):24531-24538 (1999).
C9	Bonnefoy et al., "The respiratory gene <i>OXA1</i> has two fission yeast orthologues which together encode a function essential for cellular viability," <i>Molecular Microbiology</i> , 35(5):1135-1145 (2000).
C10	Bonnefoy et al., "Cloning of a human gene involved in cytochrome oxidase assembly by functional complementation of an <i>oxa1</i> <sup>-</sup> mutation in <i>Saccharomyces cerevisiae</i> ," <i>Proc. Natl. Acad. Sci. USA</i> , 91:11978-11982 (1994).
C11	Dalbey et al., "Evolutionarily Related Insertion Pathways of Bacterial, Mitochondrial, and Thylakoid Membrane Proteins," <i>Annu. Rev. Cell Dev. Biol.</i> , 16:51-87 (2000).
C12	Dalbey et al., "Protein translocation into and across the bacterial plasma membrane and the plant thylakoid membrane," <i>TIBS</i> , 24:17-21 (1999).
C13	Dartois et al., "Genetic Analysis and Overexpression of Lipolytic Activity in <i>Bacillus subtilis</i> ," <i>Applied and Environmental Microbiology</i> , 60(5):1670-1673 (1994).
C14	de Gier et al., "Assembly of a cytoplasmic membrane protein in <i>Escherichia coli</i> is dependent on the signal recognition particle," <i>FEBS Letters</i> , 399:307-309 (1996).
C15	Deuerling et al., "The <i>ftsH</i> gene of <i>Bacillus subtilis</i> is involved in major cellular processes such as sporulation, stress adaptation and secretion," <i>Molecular Microbiology</i> , 23(5):921-933 (1997).
C16	Errington et al., "Structure and function of the <i>spoIIIJ</i> gene of <i>Bacillus subtilis</i> : a vegetatively expressed gene that is essential for $\sigma^G$ activity at an intermediate stage of sporulation," <i>Journal of General Microbiology</i> , 138:2609-2618 (1992).
C17 ✓	Fekkes et al., "Protein Targeting to the Bacterial Cytoplasmic Membrane," <i>Microbiology and Molecular Biology Reviews</i> , 63(1):161-173 (1999).
C18	**Hale & Marham, <i>The Harper Collins Dictionary of Biology</i> , Harper Perennial, NY, 1991.
Examiner	/Nancy Vogel/
Date Considered	05/04/2007
<p>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant</p>	

# **INFORMATION DISCLOSURE CITATION**

Attorney Docket No.: GC715-2-US	Serial No.: 10/500,660
Applicant: BRON et al.	
Filing Date: March 31, 2005	Group: 1636
Page 3 of 5	Date of this Submission: March 27, 2006

## **OTHER DOCUMENTS**

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
C19 /N.V./	He et al., "Membrane Translocation of Mitochondrially coded Cox2p: Distinct Requirements for Export of N and C Termini and Dependence on the Conserved Protein Oxa1p," <i>Molecular Biology of the Cell</i> , 8:1449-1460 (1997).
C20	Hell et al., "Oxa1p mediates the export of the N- and C-termini of pCoxII from the mitochondrial matrix to the intermembrane space," <i>FEBS Letters</i> , 418:367-370 (1997).
C21	Hell et al., "Oxa1p, an essential component of the N-tail protein export machinery in mitochondria," <i>Proc. Natl. Acad. Sci. USA</i> , 95:2250-2255 (1998).
C22	Herrmann et al., "Insertion into the mitochondrial inner membrane of a polytopic protein, the nuclear-encoded Oxa1p," <i>The EMBO Journal</i> , 16(9):2217-2226 (1997).
C23	Houben et al., "Nascent Lep inserts into the <i>Escherichia coli</i> inner membrane in the vicinity of YidC, SecY and SecA," <i>FEBS Letters</i> , 476:229-233 (2000).
C24	Houben et al., "YidC and SecY Mediate Membrane Insertion of a Type I Transmembrane Domain," <i>The Journal of Biological Chemistry</i> , 277(39):35880-35886 (2002).
C25	Jacobs et al., " <i>Bacillus subtilis</i> PrsA is required <i>in vivo</i> as an extracytoplasmic chaperone for secretion of active enzymes synthesized either with or without pro-sequences," <i>Molecular Microbiology</i> , 8(5):957-966 (1993).
C26	Jiang et al., "Differential processing of Propeptide Inhibitors of Rap Phosphatases in <i>Bacillus subtilis</i> ," <i>Journal of Bacteriology</i> , 182(2):303-310 (2000).
C27	Jongbloed et al., "TatC Is a Specificity Determinant for Protein Secretion via the Twin-arginine Translocation Pathway," <i>The Journal of Biological Chemistry</i> , 275(52):41350-41357 (2000).
C28	Kontinen et al., "The PrsA lipoprotein is essential for protein secretion in <i>Bacillus subtilis</i> and sets a limit for high-level secretion," <i>Molecular Microbiology</i> , 8(4):727-737 (1993).
C29	Kunst et al., "The complete genome sequence of the Gram-positive bacterium <i>Bacillus subtilis</i> ," <i>Nature</i> , 390:249-264, (1997).
C30	Kyhse-Andersen, "Electroblotting of multiple gels: a simple apparatus without buffer tank for rapid transfer of proteins from polyacrylamide to nitrocellulose," <i>Journal of Biochemical and Biophysical Methods</i> , 10:203-209 (1984).
C31	Meijer et al., "The endogenous <i>Bacillus subtilis</i> (natto) plasmids pTA 1015 AND pTA 1040 contain signal peptidase-encoding genes : identification of a new structural module on cryptic plasmids," <i>Molecular Microbiology</i> , 17(4):621-631 (1995).
C32	**Miller, J. H., Experiments in Molecular Biology, Cold Spring Harbor Laboratory Press, Cold Spring Harbor NY (1982).
C33	Moore et al., "Chloroplast Oxa1p Homolog Albino3 Is Required for Post-translational Integration of the Light Harvesting Chlorophyll-binding Protein into Thylakoid Membranes," <i>The Journal of Biological Chemistry</i> , 275(3):1529-1532 (2000).
Examiner	/Nancy Vogel/
Date Considered	05/04/2007
<p>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

PTO-1449

# **INFORMATION DISCLOSURE CITATION**

<b>Attorney Docket No.:</b> GC715-2-US	<b>Serial No.:</b> 10/500,660
<b>Applicant:</b> BRON et al.	
<b>Filing Date:</b> March 31, 2005	<b>Group:</b> 1636
<b>Page 4 of 5</b>	<b>Date of this Submission:</b> March 27, 2006

## **OTHER DOCUMENTS**

<b>Examiner's Initials</b>	<b>Author, Title, Date, Pertinent Pages, etc.</b>
C34 /N.V./	Murakami et al., "Analysis of the <i>Bacillus subtilis</i> spoIIJ Gene and Its Parologue Gene, yqG. <i>Journal of Bacteriology</i> , 184(7):1998-2004 (2002).
C35	Palva, "Molecular cloning of $\alpha$ -amylase gene from <i>Bacillus amyloliquefaciens</i> and its expression in <i>B. subtilis</i> ," <i>Gene</i> , 19:81-87 (1982).
C36	Pogliano et al., "SecD and SecF facilitate protein export in <i>Escherichia coli</i> ," <i>The EMBO Journal</i> , 13(3):554-561 (1994).
C37	Pohlschröder et al., "Protein Translocation in the Three Domains of Life: Variations on a Theme," <i>Cell</i> , 91:563-566 (1997).
C38	Prágai et al., "YsxC, a Putative GTP-Binding Protein Essential for Growth of <i>Bacillus subtilis</i> 168," <i>Journal of Bacteriology</i> , 182(23):6819-6823 (2000).
C39	Prágai et al., "The signal peptidase II ( <i>Isp</i> ) gene of <i>Bacillus subtilis</i> ," <i>Microbiology</i> , 143:1327-1333 (1997).
C40	Robinson et al., "Protein Targeting by the Twin-Arginine Translocation Pathway," <i>Nature Reviews Molecular Cell Biology</i> , 2:350-356 (2001).
C41	Sääf et al., "Membrane Topology of the 60-kDa Oxa1p Homologue from <i>Escherichia coli</i> ," <i>The Journal of Biological Chemistry</i> , 273(46):30415-30418 (1998).
C42	**Sambrook, J. et al., <i>Molecular Cloning, A Laboratory Manual</i> , 2nd Ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York, 1989.
C43	Samuelson et al., "YidC mediates membrane protein insertion in bacteria," <i>Letters to Nature</i> , 406:637-641 (2000).
C44	Schaeffer et al., "Catabolic Repression of Bacterial Sporulation," <i>Proc. Natl. Acad. Sci. USA</i> , 54:704-711 (1965).
C45	Scotti et al., "YidC, the <i>Escherichia coli</i> homologue of mitochondrial Oxa1p, is a component of the Sec translocase," <i>The EMBO Journal</i> , 19(4) :542-549 (2000).
C46	**Singleton et al., <i>Dictionary of Microbiology and Molecular Biology</i> , 2 <sup>nd</sup> Ed., John Wiley and Sons, New York, 1994.
C47	Sipos et al., "Predicting the topology of eukaryotic membrane proteins," <i>Eur. J. Biochem.</i> , 213:1333-1340 (1993).
C48	Stuart et al., "Making membranes in bacteria," <i>Nature</i> , 406:575, 577 (2000).
C49	Tjalsma et al., "Functional analysis of the secretory precursor processing machinery of <i>Bacillus subtilis</i> : identification of a eubacterial homolog of archaeal and eukaryotic signal peptidases," <i>Genes &amp; Develop.</i> , 12:2318-2331 (1998).
<b>Examiner</b> /Nancy Vogel/	<b>Date Considered</b> 05/04/2007
<p><b>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant</b></p>	

PTO-1449

**INFORMATION DISCLOSURE CITATION**

Attorney Docket No.: GC715-2-US	Serial No.: 10/500,660
Applicant: BRON et al.	
Filing Date: March 31, 2005	Group: 1636
Page 5 of 5	Date of this Submission: March 27, 2006

**OTHER DOCUMENTS**

Examiner's Initials	Author, Title, Date, Pertinent Pages, etc.
C50 /N.V.	Tjalsma et al., "Bacillus subtilis Contains Four Closely Related Type I Signal Peptidases with Overlapping Substrate Specificities," <i>The J. Biol. Chem.</i> , 272(41):25983-25992 (1997).
C51	Tjalsma et al., "The Role of Lipoprotein Processing by Signal Peptidase II in the Gram-positive Eubacterium <i>Bacillus subtilis</i> ," <i>The J. Biol. Chem.</i> , 274(3):1698-1707 (1999).
C52	Tjalsma et al., "Conserved Serine and Histidine Residues Are Critical for Activity of the ER-type Signal Peptidase SipW of <i>Bacillus subtilis</i> ," <i>The Journal of Biological Chemistry</i> , 275(33):25102-25108 (2000).
C53	Tjalsma et al., "Signal Peptide-Dependent Protein Transport in <i>Bacillus subtilis</i> : a Genome-Based Survey of the Secretome," <i>Microbiology and Molecular Biology Reviews</i> , 64(3):515-547 (2000).
C54	Urbanus et al., "Sec-dependent membrane protein insertion: sequential interaction of nascent FtsQ with SecY and YidC," <i>EMBO Reports</i> , 21(61):524-529 (2001).
C55	Vagner et al., "A vector for systematic gene inactivation in <i>Bacillus subtilis</i> ," <i>Microbiology</i> , 144:3097-3104 (1998).
C56	Van Dijl et al., "Signal peptidase I overproduction results in increased efficiencies of export and maturation of hybrid secretory proteins in <i>Escherichia coli</i> ," <i>Mol. Gen. Genet.</i> , 227:40-48 (1991).
C57	Van Dijl et al., "Identification of the Potential Active Site of the Signal Peptidase SipS of <i>Bacillus subtilis</i> ," <i>J. Biol. Chem.</i> , 270(8):3611-3618 (1995).
C58	Van Dijl et al., "Non-functional expression of <i>Escherichia coli</i> signal peptidase I in <i>Bacillus subtilis</i> ," <i>Journal of General Microbiology</i> , 137:2073-2083 (1991).
C59	van Wely et al., "Functional Identification of the Product of the <i>Bacillus subtilis</i> yvaL Gene as a SecG Homologue," <i>Journal of Bacteriology</i> , 181(6):1786-1792 (1999).
C60	van Wely et al., "The carboxyl terminus of the <i>Bacillus subtilis</i> SecA is dispensable for protein secretion and viability," <i>Microbiology</i> , 146:2573-2581 (2000).
C62	Vieira et al., "New pUC-derived cloning vectors with different selectable markers and DNA replication origins," <i>Gene</i> , 100:189-194 (1991).
C63 ✓	Wertman et al., "Host vector interactions which affect the viability of recombinant phage lambda clones," <i>Gene</i> , 49:253-262 (1986).
Examiner	/Nancy Vogel/
Date Considered	05/04/2007
<p><b>Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant</b></p>	

PTO-1449